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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/362,055	07/28/99	GOSAIN	D P99.1160

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MMC1/0413

EXAMINER

SCHILLINGER, L

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 04/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/362,055

Applicant(s)

Gosaln et al

Examiner

Laura Schillinger

Group Art Unit

2813



☒ Responsive to communication(s) filed on Jul 28, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-11 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-11 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al ('585).

In reference to claim 1, Zhang et al teaches a method comprising:

forming a semiconductor film on a substrate (Col.4, lines: 28-32);

forming a hydrogen-containing film on the semiconductor film (Col.6, lines: 1-25);

irradiating a pulse energy beam to heat the hydrogen-containing film to diffuse hydrogen in the semiconductor film (col.6, lines: 57-65).

In reference to claim 2, Zhang et al teaches wherein the pulse energy beam does not melt the semiconductor film (Col.4, lines: 15-20).

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In reference to claim 3, Zhang et al teaches wherein the pulse energy beam is a laser, electron, or ion beam (col.6, line: 59).

In reference to claim 4, Zhang et al teaches wherein the energy beam crystallizes the semiconductor film and has a lower energy density used while heating the hydrogen layer (Col.4, lines: 35-40).

In reference to claim 6, Zhang et al teaches wherein the semiconductor film is polycrystalline, amorphous, or single crystal silicon film (Col.4, lines: 28-33).

In reference to claim 7, Zhang et al teaches wherein the hydrogen containing film is silicon nitride or amorphous silicon, or a combination (Col.6-7, lines: 65-3).

In reference to claim 8, Zhang et al teaches including an absorption layer (Col.4, lines: 55-60).

In reference to claim 9, Zhang et al teaches wherein the absorption layer is selected from the group consisting of molybdenum, tantalum, and tungsten (Col.4, lines: 55-60) .

In reference to claim 10, Zhang et al teaches wherein the absorption film is silicon (Col.6, lines: 5-8).

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In reference to claim 11, Zhang et al teaches wherein the device is a TFT (Col.1, lines: 15-20).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al ('585) as applied to claim 1 above, and further in view of Inou ('461).

In reference to claim 5, Zhang teaches wherein the substrate is plastic (Col.1, lines: 15-20).

However Zhang fails to explicitly teach that the plastic substrate is selected from the group comprising: polyether sulfone, polyethylene terephthalate, polymethyl methacrylate, and polycarbonate.

However, Inou teaches that plastic substrates may be selected from the group comprising: polyether sulfone, polyethylene terephthalate, polymethyl methacrylate, and polycarbonate (Col.7, lines: 25-30).

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Therefore it would have been obvious to one of ordinary skill in the art to combine the plastic substrate taught by Zhang with the materials taught by Inou, because the materials taught by Inou are heat resistant and would prevent substrate warpage.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hudgens et al ('379) teaches a similar method for a plasma deposited coating and low temperature plasma method.

6.

Any inquiry concerning this communication from examiner should be directed to Laura Schillinger whose telephone number is (703) 308-3155. The examiner can normally be reached by telephone on Monday to Friday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Bowers, can be reached on (703) 308-2417. The fax phone number for the group is (703) 308-7722.

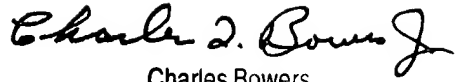
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LMS

April 10, 2000

A handwritten signature in black ink, reading "Charles D. Bowers". The signature is written in a cursive style with a large, stylized "C" and "B".

Charles Bowers
Supervisory Patent Examiner
Technology Center 2800